ACTINOMYCOSIS OF THE SALPINX

by

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Actinomycosis in itself, is a rare entity and that of the tube is rarer still. It is a subacute or chronic granulomatous lesion of a progressive nature. Paalman *et al* in 1949 reviewed 109 cases and added 8 of theirs. Later, Ingals and Merendino reviewed 129 cases while reporting 9 more.

Case History:

L. age 30 years, a house wife from a village in Rohtak near Delhi, was admitted on 17-4-70, complaining of a mass in the left iliac fossa, which was small at first but increased in size during the last year, with a rapid growth in the last 2 months. She also complained of pain in the left iliac fossa since 2 months. The pain was severe and came in spasms.

There was nothing significant in past and family history. Menstrual history was 3-4/30, regular. Her last menstrual period was 6 days ago.

She has two full term normal deliveries. The last delivery was 3 years ago.

Physical examination revealed that her general condition was fair, though she was groaning with pain. Pulse was 84/mt. B.P.-100/70 m.m. of Hg. Tongue and mucous membranes were pink, lymph glands were not palpable. Cardiovascular and respiratory systems were normal.

On abdominal examination there was a firm immobile mass in the left iliac fossa arising out of the pelvis and up to the umbilicus. The mass was tender and in size 6″ x 4″. The left limit was 6″ left of the mid-line and the right limit 1″ lateral to the mid-line. The percussion note was dull over the mass.

Bimanual examination showed the cervix pointing downwards, with an anteverted normal sized uterus and a very tender mass close to uterus in the left fornix. The right fornix was clear.

A diagnosis of twisted ovarian cyst was made.

On the evening of admission her blood pressure dropped to 70/40 mm, of Hg. and she was put on intravenous fluids. On the second day, she developed a temperature of 102°F though the pain was less. Inj. crystalline penicillin, 5 lacs 6 hourly I.M. and Inj. streptomycin 1 grm. I.M. once a day were started. Investigations showed the haemoglobin to be 10 gm.%, W.B.C. count 5,600/c.mm. Urine showed 5-10 pus cells/H.P.F. E. coli was cultured from the vaginal smear.

On the 3rd day at laparotomy a mass 6″ x 4″ was found to the left of the uterus involving the left tube and ovary. The tube was markedly thickened and the entire mass was adherent anteriorly to the peritoneum and to the left pelvic wall. It involved the broad ligament and was adherent to the pouch of Douglas posteriorly. A fair amount of pus was found in the abscess cavity which got opened up during the dissection. The margins of the mass were identified and separated from the adhesions. The infundibulopelvic ligament was clamped, cut and ligated. The removal of the mass was started laterally and proceeded towards the uterus.

Most of the mass had been removed but as the patient's condition deteriorated, part of the tube near the uterus was left behind. The uterus and the right tube

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and ovary were healthy. No evidence of tuberculosis was found in the pelvis, intestines and abdominal cavity.

Postoperatively as pus had been located in the mass the patient was put on chloromycetin 250 mg. 6 hourly. She developed a high temperature but was afebrile on the fourth day.

On the 5th postoperative day the patient developed guarding and rigidity, on the left side with palpable inguinal glands. Two days later a mass was found in the same area and by the tenth day the mass had filled the whole of the lower abdomen on the left.

The histopathological report said "acute on chronic salpingo-oophoritis with mycotic infection. No evidence of tuberculosis".

Injections of crystalline penicillin 5 lacs 6 hourly I.M. and streptomycin 1 grm. I.M. once a day were started and continued for 33 days. The daily penicillin dose was 2 million units and the total dose she received was 66 million units.

On the seventeenth post-operative day the patient developed acute pain in the lateral and front of the left thigh suggestive of metastasis. X-ray showed no involvement of the bone. The leg was immobilised and the patient sedated. The pain gradually disappeared over a period of three to four days.

As the mass was not resolving the patient was put on prednisolone 10 mg. four times a day from the eighteenth day till the mass completely resolved. The total dose received was 710 mg.

Six weeks after the operation the abdominal findings showed that the mass and the inguinal glands had completely disappeared. Vaginal examination showed the cervix pointing backward with an anteverted normal sized uterus. The fornices were clear.

Post-operative investigations

Urine—One pus cell/H.P.F.

Urine culture: E. Coli sensitive to kenamycin.

Blood culture—sterile.

Pus from the abscess cavity—Coagulase-negative staphylococci isolated.

Pathological Findings

Grossly, the specimen comprised of the tube and ovary embedded in a mass of adhesions, together with several tags of fibrofatty tissue.

Microscopically—Sections from the fallopian tube show an intact mucosa with patchy and mild infiltration of inflammatory cells in the mucosa and submucosa. The perisalpinx shows evidence of intense infiltration by polymorphs and plasma cells. In the centre of this exudate is seen the typical active mycotic granule surrounded by lipophages (Fig. 1). The mycotic granule comprises a central tangled mass of mycelial threads with a radial arrangement at the periphery. Gram's stain revealed non acid fast and gram positive organism."

Discussion

Actinomycosis is produced by Actinomyces Bovis, an anaerobic non acid fast gram positive organism. Of the three types found, actinomyces Israeli is found in human beings and is a commonest in the mouth, tonsil or carious tooth. It occurs in three areas, cervico-facial thoracic and abdominal. The last occurs in about 19% of cases. The disease spreads to the adjacent tissue without anatomical demarcation and occasionally it spreads by metastasis. It communicates to the surface by sinuses and the pus has characteristic sulphur granules which are white at first which become yellow and finally brown. Microscopically, the mycelium has branching filaments which interlock irregularly in the centre and are radial at the periphery. Around the colony lipoid and hyaline material is deposited by host tissue in the form of clubs which are gram negative. This gives it the name "Ray Fungus". The organism is difficult to culture as it has to be incubated anaerobically.

Abdominally, the caecum or appendix is the usual site of infection and it spreads to the abdominal wall or adjacent peritoneum. Fallopian tube infection is usually secondary to an intestinal focus which

often can be traced to the ileo-caecal segment. Paalman *et al* found that the infection spreads both by direct extension and through the blood stream to the lungs, brain and liver. In the present case spread was probably from the sigmoid by direct extension as there were dense adhesions of the tube and ovary on the left and posterior sides, although at operation there was no obvious evidence of involvement of the colon by way of sinuses. This is supported by the fact that tubal mucosa and wall showed only a mild inflammation whereas the intensity of the inflammatory reaction and the presence of the typical mycotic granule, was evidenced in the perisalpinx. Our findings are also in agreement with Stevenson (1957) who could find only eleven examples in the reports from Britain. In most of these the primary source appeared to be from the colon.

The intense pain in thigh experienced by the patient could have been a metastatic lesion though spasm could not be ruled out.

In the treatment, the drug of choice is penicillin in high doses, though sulpha can be tried. When the patient is sensitive to penicillin, tetracyclin can be used. In the case reported by Loth, Penicillin 1.2 million units were given I.M. daily, alongwith 2 grm. of tetracyclin I.V. Surgical treatment should be early with pre and post-operative penicillin.

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See Fig. on Art Paper I